

ACS Technology Fellowship Report
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For this project, I designed a web survey to examine use of course management systems across disciplines. I sent personal invitations to Southwestern University faculty and also contacted Information Technology support staff at Rhodes College, Hendrix College, The University of the South, Furman University and Rollins. Overall, I received 33 respondents 1 Arts, 9 Natural Science, 1 Physical Science, 12 Social Science, 9 Humanities, and 1 NA. More specific information on the composition of the respondents can be found below. For this project, I set out to investigate the following questions:

- A) Do the needs for tools of course management systems differ between disciplines (Arts, Humanities, Social Sciences, Natural and Physical Sciences)?
- B) Are certain tools used more or less frequently in courses designed for introductory students (1st years) versus advanced courses (juniors/seniors), and if so, does it depend on the course type (lecture, discussion or seminar)?

As of 12/29/04, the survey can be found at: <http://www.southwestern.edu/ITS/burks.php>

Results for A) Trends in use of tools between disciplines:

General trends:

1. No clear distinction in use of tools occurred between disciplines.
2. In all the disciplines, clear responses were apparent of those respondents that favored using multiple tools within their teaching and those for which a CMS does not fit their pedagogical style. From the response to the questions (see below), it was not completely clear how to encourage adoption.
3. Per capita, faculty from Humanities indicated that they were the most engaged with CMS or would start using the most tools.
- 4.

	Social Sciences	Humanities	Natural Sciences
Use Occasionally	35	74	69
Use Frequently	42	135	116
Would Start Using	12	102	50
Respondents	12	9	9
Per Capita Total	7.4	34.5	25

Specific tools:

5. Personal web pages or a page for "weblinks" and a gradebook were the most common features needed by faculty. It did not tend to differ across disciplines.
6. Only 2/9 respondents in the Natural Sciences and 1/12 respondents in the Social Sciences suggested that they would use quizzes frequently. All responses occurred for Introductory Courses.
7. Several faculty within each of the 3 largest response groups indicated that "Threaded Discussion" would be a useful tool.
8. If faculty found Bulletin Boards applicable, it was mostly for occasional use.
9. Internal email, journaling and chat were not commonly indicated for use.

Results for B) Trends in use of tools across courses

1. In general, faculty indicated that course management systems were “not applicable” to First Year Seminars and Senior Seminars.
 - If respondents did indicate an interest in use, then the main tools selected were File Exchange and Student Portfolios.
2. More faculty indicated that they would use course management systems MORE appropriate for 1st year, introductory courses (less “Not applicable responses) than discussion courses or upper-level lectures.
 - The most popular tools for use included personal web pages, gradebooks and threaded discussions (esp. in Social Sciences and Humanities).

Other Results:

Respondent Composition:

- 33 response
 - **6:** less 2 yrs, **13:** 2-5 years, **3:** 6-10 years, **8:** 11-20 years **3:** > 20 years
 - **Overall, the survey seemed to have a balance of experience**
 - 8/33 do not currently post materials for students to access electronically;
 - 25 do:
 - 9 via combination of webpage, email or CMS, 7 via email, 6 via webpage, 3 via CMS
 - Word, PowerPoint and PDF files were the most common type of files to post.
- “Wary of time investment” was most reported reason that some respondents had not used a Course Management System before. “Not available” ranked second. Four respondents reported that a CMS did not fit with their pedagogical style.
- Most of the insight from faculty comes from answers to the following questions (see **Appendix 1** for the means and standard deviations. A “5” indicates that the respondent “strongly agreed” with the statement).
 1. I often look for ways to incorporate technology into my teaching.
 2. I would be more likely to adopt a CMS if a qualified student worker (10/hrs for set-up) came with the package.
 3. I would be more likely to adopt a CMS if my students requested it.
 4. I would be more likely to adopt a CMS if there was a dedicated staff member to assist with any questions or problems.
 5. If offered, I would attend a monthly information workshop/class about practical applications of course management systems.
 6. I would prefer that only my students have access to course materials (versus posting on worldwide web; issue of security).
 7. I am concerned about posting copyrighted materials.
 8. I am concerned about the start-up time investment to learn a CMS.
 9. I am concerned about the amount of technological prowess necessary to use a CMS.
 10. I think I would save time by loading files onto a CMS than photocopying and putting items on library reserve.
 11. I think a course management system is more appropriate for large classes (>30) than the courses I often teach.
 12. I think that the needs of a course delivery system vary dramatically between introductory (1st year) and more senior courses.
 13. I think the needs for a course delivery system vary dramatically between a lecture versus a discussion course format.
 14. I think my students are computer savvy.
 15. I think my students would eagerly use a course management system if available.

Opinions about Course Management Systems across Disciplines

Note: Points below correspond to questions listed above. A score of 5 indicated that they agreed with the statement as worded.

1. Faculty responding to this survey generally agreed that they often looked for ways to incorporate technology into their teaching.
2. Surprisingly, faculty did not report that they agreed (mean only $3.67 < 4$) they would be more likely to adopt a CMS if a qualified student worker came with the package.
3. In addition, faculty were not more likely to adopt a CMS if students requested it. This was very consistent across disciplines.
4. Faculty did agree (mean = 3.97, near 4) that they would be more likely to adopt a CMS if a dedicated staff member was available, especially in the Social Sciences.
5. Faculty across disciplines are unlikely (2-3.22) to attend a monthly informational workshop about practical applications of course management systems.
6. Faculty did not seem to care if students only had access to course materials.
7. Faculty showed a similar ambivalence about posting copyrighted materials (mean = 3.67), although faculty in the Humanities and Natural Sciences were more concerned about this issue.
8. Faculty in the Natural and Social Sciences were more concerned about the start-up time investment than those in the Humanities, although this did not appear to be a statistically significant difference (i.e. large standard deviations).
9. The amount of technological prowess needed to use a CMS did not faze faculty across disciplines.
10. Faculty across disciplines, esp. the Natural Sciences, did not think that a CMS would save time.
11. Faculty disagreed (mean = 2.75) that a CMS is more appropriate for large classes.
12. Faculty had no noticeable opinion with regards to whether the needs for a CMS varied dramatically between 1st year and more senior level courses.
13. Faculty also did not agree or disagree that needs for a course delivery system varied between a lecture or discussion format.
14. In general, faculty across the disciplines, although less so in Humanities, agreed that their students were computer savvy.
15. Faculty in the Social Sciences agreed that students would eagerly use a CMS if available. Confidence in this assertion from the Humanities and Natural Sciences did not measure as high.

Discussion:

Faculty needs for a CMS did not obviously differ across disciplines. A lot of variation occurred even within disciplines. As mentioned above, those engaged in the tools could apply them to multiple courses. Those not convinced of the merits of such tools did not find them applicable. More specific faculty concerns are included as written comments in **Appendix 2**.

In contrast to the ambiguity across disciplines, the majority of faculty, however, recognized an increased utility of the tools for introductory courses and the absence of a CMS in seminar-based courses. This is an interesting result because faculty overall did not distinguish between this seniority issue in responding to the specific questions (#12 above). This may be due to the circumstance that introductory courses often have more students, thus necessitating the need for tools that can keep track of multiple assignments, etc...However; this is not the only reason. Other factors must also be at

work as faculty in the survey discussed above disagreed that a CMS was more appropriate for larger courses (#11 above).

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Dissemination:

The survey results and this report will soon be available for ACS faculty via my website: www.southwestern.edu/~burksr

As the needs of faculty did not differ, no need for a flow-chart routing faculty to different course management systems actually occurred. Few faculty wanted to track or quiz students. Therefore, most faculty can simply take advantage of the tools available via Segue which does not require a license.

Final Notes about Doing a Technology Survey on the Web:

For my own development, I learned several things about writing surveys. Unfortunately, some of the links that I prepared to define features of course management systems did not make it into the actual web survey. In particular, it is important to have a "Do Not Know" Choice for respondents. Several faculty indicated that they were not sure of what they were being asked. Also, it is necessary to understand how the data will eventually appear in a spreadsheet. For ease of data analysis, one should make sure that all responses to a particular question start in the same column. Because respondents could "check all that applied," the input of the questions into the spreadsheet was skewed for each respondent. This "glitch" made it impossible to analyze the data in its downloaded form and it required much effort to reformat the data for interpretation. For future efforts, it might be worth investigating an established survey program.

Conclusion:

In general, most faculty simply want to be able to post their files for students, but worry about the continued accessibility of these files. Time is the most critical obstacle to overcome in convincing faculty that CMSs can aid in their teaching. Perhaps with some more detailed observation, more insights that might be drawn from the survey. As a faculty interested in technology, I look forward to engaging with this issue as I continue my own career. Please feel free to contact me regarding any questions.

Respectively submitted,



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Appendix I: Results of Survey (Questions listed fully above) Categorized by Discipline:

	MEAN SOCIAL SCIENCE	MEAN ART & OTHER	MEAN HUMANITIES	MEAN NATURAL SCI	MEAN OVERALL
Incorporate tech?	3.50	4.33	3.56	4.00	3.73
Adopt with student help?	3.92	2.67	3.56	3.78	3.67
If student requested	3.58	3.33	3.44	3.78	3.58
If staff member	4.42	3.33	3.67	3.89	3.97
Monthly session	2.58	2.00	3.22	2.33	2.64
Only students	3.58	4.00	3.11	3.56	3.48
Concern copyright	3.25	3.67	4.00	3.89	3.67
Concern start-up	3.83	2.33	2.89	4.44	3.61
Concern tech know	2.83	2.67	2.56	2.56	2.67
Save time	3.58	3.33	3.33	2.89	3.30
CMS more for large	2.42	2.33	3.22	2.88	2.75
Vary between 1st/sen	2.42	2.67	3.33	3.63	3.00
Vary between x lect/disc	3.08	3.33	3.67	3.67	3.42
Computer savvy	4.17	4.00	3.56	4.44	4.06
St would use CMS	4.17	4.67	3.22	3.22	3.70
	SD SOCIAL SCIENCE	SD ART & OTHER	SD HUMANITIES	SD NATURAL SCI	SD OVERALL
Incorporate tech?	1.19	0.47	1.50	0.94	1.21
Adopt with stud?	1.19	1.25	1.26	1.31	1.29
If student req	1.19	1.25	1.17	0.79	1.10
If staff member	0.86	1.70	1.49	0.74	1.19
Monthly session	0.86	1.41	1.23	0.82	1.10
Only students	1.26	1.41	0.99	1.17	1.21
Concern copyright	1.16	1.89	1.15	0.87	1.22
Concern start-up	1.28	0.94	1.37	0.68	1.35
Concern tech know	1.21	1.25	0.96	1.64	1.29
Save time	0.86	1.25	1.41	1.10	1.17
CMS more for large	0.95	1.25	1.13	0.60	1.03
Vary between 1st/sen	0.95	1.70	1.05	0.70	1.15
Vary between lect/disc	1.11	1.25	1.15	0.67	1.07
Computer savvy	0.69	0.82	1.07	0.50	0.85
St would use CMS	0.90	0.47	1.23	1.03	1.14

Appendix II: Written responses from ACS Faculty when asked about Course Management Systems

- Our newly hired faculty are bringing expertise with Blackboard or similar CMS's with them. This will soon be a taken-for-granted element of higher education. I will learn to use it when we have a CMS technology available on campus. My understanding is that licensing on Blackboard is not cost-efficient for small schools but that there are alternatives that could work for us. I'm not good at learning new computer-based technologies on my own so start-up workshops and some staff support would definitely be appreciated.
- Frankly I don't even know what this means so it's hard to answer. Also I don't know what is meant by some of the options about so it would have been more accurate to have a "don't know" response (instead I checked "do not use").
- I rather would like to explain my responses above--I'm really not quite sure what some of those things are....I find it critically important to have a place to post the syllabus reading list course schedule and assignments so that students can access them (I don't know what part that corresponds to above)---and I use this for all of my courses...I also like to post both power-point and word-based documents (my lectures and discussion questions etc)--I think that might be "file exchange"---if I could post readings I might; but I would have to scan them in first---and I'm quite happy making course packets (or having longhorn do that)I also like the idea of having a place students can go to find more electronic 'links' to stuff---and maybe ideally they could add some in as well...but I also see keeping this kind of thing updated as very time consuming...
- Would like Links to interactive dialogues with other Universities (e.g. partnering students with a similar class in another school)
- I'm only able to imagine what I might do and what these options might provide for me. I would find a techno-dummy questionnaire helpful to diagnose my needs (these questions assume I know how I would use a system if I had one) -- e.g. "To what degree would you find it helpful if students could electronically review and comment on drafts of each others papers"...I could answer that definitively YES where as I might not be checking the above boxes to indicate such because I don't really understand CMSs enough to answer the above questions in an informed way. Hope that's clear.
- I think I need more of a review of what is possible with such systems before being able to adequately answer what I would use. Still most of my reluctance to using what I am aware of is pedagogical.
- I really liked Blackboard when I used it two years ago at U.T.
- I like Segue... it would work for my needs I think the students need training and encouragement to use the "discussion" functions.
- We use Blackboard
- Let's don't even talk about accessibility issues but they are real. The problems I've had with course management systems this semester relate to the following availability (Segue was down for over a week which is inadmissible); ease of use (it's not always obvious or intuitive how to set something up in either system for example grade books in Blackboard); features supported (there are features available in Blackboard that I would have used if allowed like grading); archiving (when I create my own website. I have all the materials there for recycling in later courses whereas with a CMS I don't). There's probably more but I can't think of it right now.

- I didn't know what some of the CMS features above were (e.g. whiteboard) so I've marked as "do not use"
- Sound files integrated with text files for weekly exercises in foreign language font (already initiated with LLC). I'm willing to learn and try things! I would like a workshop with ACS colleagues in my same field swapping methods and even content.
- I would like a place to put audio files
- At Sestet I taught a 100% on-line course. Based on that experience though I think there are some pluses to on-line discussion. I would generally NOT use it in-place of real-time in-person discussion. So I see CMS as a toolbox but not a replacement for the main course in a humanities course - the in-person discussion.
- My needs/uses are probably more modest than the full-blown CMS's available, so am wary of using the big package for just a few of the tools. If I started the bulletin boards and threaded discussions in my classes, then it's one more thing I have to be on top of. I might use a CMS calendar but am happy with my HTML calendar off the course website. It would have to be as easy to set up and use as the HTML ones I do.
- I believe this type of system distances us from personal contact with students. This is counterproductive at a place like SU.
- My major concern is the trend to inaccessible materials and the decrease in collegial materials sharing that comes about through limited access CMSes. I also have so much on the web right now in self-designed systems that migration would be a royal pain.